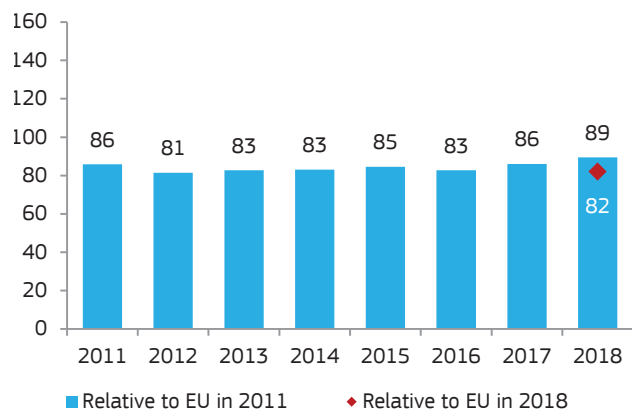




Czechia is a **Moderate Innovator**. Over time, performance has increased relative to that of the EU in 2011.



Czechia	Relative to EU 2018 in 2018	Performance relative to EU 2011 in 2011	Performance relative to EU 2011 in 2018
SUMMARY INNOVATION INDEX			
Human resources	75.0	73.4	91.7
New doctorate graduates	77.8	84.6	112.9
Population with tertiary education	61.3	45.5	73.1
Lifelong learning	88.8	92.7	90.6
Attractive research systems	65.3	48.8	73.6
International scientific co-publications	91.0	73.8	132.3
Most cited publications	43.8	37.3	48.0
Foreign doctorate students	78.1	50.2	74.7
Innovation-friendly environment	75.1	84.3	118.6
Broadband penetration	72.2	88.9	144.4
Opportunity-driven entrepreneurship	78.1	81.2	101.1
Finance and support	46.7	84.6	51.1
R&D expenditure in the public sector	96.0	70.1	88.8
Venture capital expenditures	5.0	101.7	6.5
Firm investments	94.4	104.6	112.6
R&D expenditure in the business sector	82.8	64.0	94.9
Non-R&D innovation expenditures	89.3	134.6	104.3
Enterprises providing ICT training	110.5	113.3	140.0
Innovators	96.9	105.4	88.0
SMEs product/process innovations	94.9	99.0	92.1
SMEs marketing/organizational innovations	82.9	120.1	70.7
SMEs innovating in-house	112.6	97.0	101.4
Linkages	84.1	71.5	87.3
Innovative SMEs collaborating with others	107.1	101.1	114.4
Public-private co-publications	73.0	71.4	85.6
Private co-funding of public R&D exp.	71.2	49.8	68.3
Intellectual assets	63.8	50.7	62.1
PCT patent applications	23.2	21.1	21.1
Trademark applications	69.1	71.4	76.9
Design applications	100.0	64.3	92.2
Employment impacts	118.4	114.6	123.6
Employment in knowledge-intensive activities	84.7	84.6	92.3
Employment fast-growing enterprises	144.6	136.3	146.3
Sales impacts	93.0	105.4	95.8
Medium and high-tech product exports	128.2	127.2	138.3
Knowledge-intensive services exports	49.3	41.1	50.9
Sales of new-to-market/firm innovations	100.0	153.4	97.0

The colours show normalised performance in 2018 relative to that of the EU in 2018: dark green: above 120%; light green: between 90% and 120%; yellow: between 50% and 90%; orange: below 50%. Normalised performance uses the data after a possible imputation of missing data and transformation of the data.

Employment impacts, Innovators and Firm investments, are the strongest innovation dimensions. Czechia scores high on Employment fast-growing enterprises of innovative sectors, Medium and high-tech product exports, and SMEs innovating in-house. *Finance and support, Intellectual assets and Attractive research systems*, are the weakest innovation dimensions. Low-scoring indicators include Venture capital expenditures, PCT patent applications, and Most cited publications.

Structural differences with the EU are shown in the table below. Average annual GDP growth, the employment share in manufacturing, and the value-added share of foreign-controlled enterprises are well above the EU average. Enterprise births and top R&D spending enterprises per 10 million population are well below the EU average.

	CZ	EU
Performance and structure of the economy		
GDP per capita (PPS)	25,900	29,500
Average annual GDP growth (%)	3.7	2.2
Employment share manufacturing (NACE C) (%)	27.7	15.5
of which High and medium high-tech (%)	41.1	37.5
Employment share services (NACE G-N) (%)	35.6	41.8
of which Knowledge-intensive services (%)	34.6	35.0
Turnover share SMEs (%)	39.6	37.9
Turnover share large enterprises (%)	42.7	44.4
Foreign-controlled enterprises – share of value added (%)	22.7	12.6
Business and entrepreneurship		
Enterprise births (10+ employees) (%)	0.5	1.5
Total Entrepreneurial Activity (TEA) (%)	n/a	6.7
FDI net inflows (% GDP)	3.6	4.3
Top R&D spending enterprises per 10 million population	2.5	19.6
Buyer sophistication (1 to 7 best)	3.0	3.7
Governance and policy framework		
Ease of starting a business (0 to 100 best)	75.9	76.8
Basic-school entrepren. education and training (1 to 5 best)	n/a	1.9
Govt. procurement of advanced tech products (1 to 7 best)	3.1	3.5
Rule of law (-2.5 to 2.5 best)	1.1	1.2
Demography		
Population size (millions)	10.6	511.3
Average annual population growth (%)	0.3	0.2
Population density (inhabitants/km ²)	136.9	117.5

EU targets for 2020

Indicator	2014	Latest	Target ¹
Gross domestic expenditure on R&D (% of GDP)	1.97	1.79	1.00
Tertiary educational attainment (% of population aged 30-34)	28.2	33.7	32.0

¹ Sources are provided in the introduction to the country profiles.

European Semester country report and country specific recommendations:

<https://rio.jrc.ec.europa.eu/en/library/research-and-innovation-analysis-european-semester-2019-country-reports>
<https://rio.jrc.ec.europa.eu/en/library/country-specific-recommendations-2019-research-and-innovation-analysis>